



PUBLIC HEALTH DEPARTMENT.

ANNUAL REPORT
OF THE
MEDICAL OFFICER
FOR THE YEAR 1909.

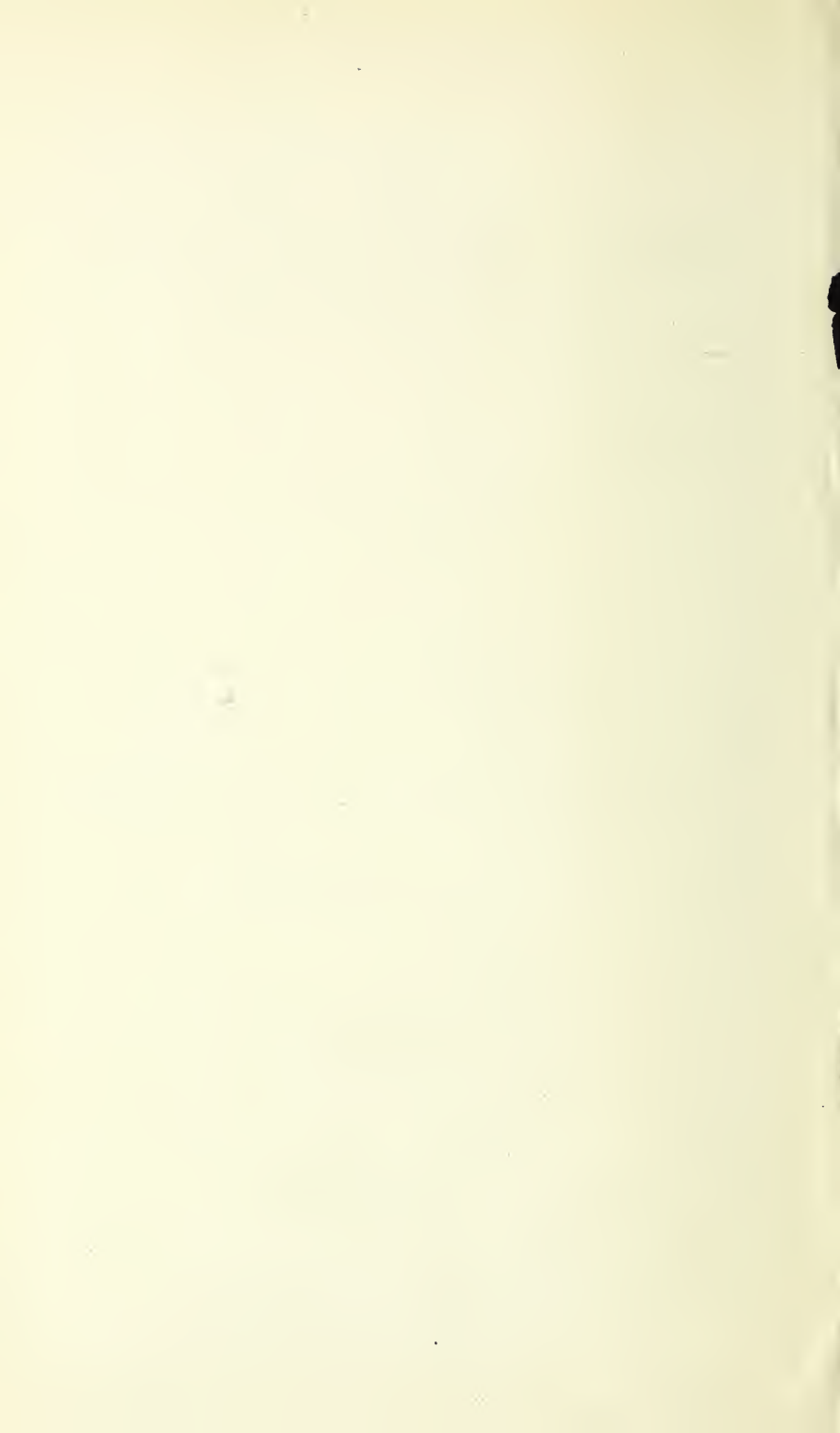
ARTHUR GREENHALGH,

M.B., Ch.B., M.R.C.S., D.P.H.,

Medical Officer of Health.



ACCRINGTON :
JAS. BROADLEY, LTD., Printers, "Gutenberg" Works.



HEALTH COMMITTEE.

From November, 1909, to November, 1910.

Chairman : — — — Alderman W. H. RAWSON.

Vice-Chairman : — Councillor J. H. LUPTON.

Committee :

THE MAYOR (Councillor T. E. NUTTALL).

Alderman T. CRONSHAW.

Councillor W. T. BOLTON.

„ J. R. CAMERON.

„ D. C. DEWHURST.

„ J. R. EMMETT.

„ J. C. LUPTON.

„ H. NUTTALL.

„ J. SMITH.

„ A. T. TOWNSEND.

„ J. WHITTAKER.

„ W. WILSON.

Day of Meeting :

Thursday, generally the third in the month, at 4-15 p.m.

HEALTH DEPARTMENT.

Medical Officer of Health :

ARTHUR GREENHALGH, M.B., Ch. B., M.R.C.S., D.P.H.

Chief Sanitary Inspector :

RICHARD DIGGLE, Assoc. Royal San. Inst.

Assistant Sanitary Inspector :

JOHN E. CRAWSHAW, Cert. Royal San. Inst.

Clerks :

HORACE FODEN.

JOHN A. HINDLE.

Disinfector and Caretaker of Smallpox Hospital :

JOHN R. WOODCOCK.

Foremen of Scavenging Departments :

WILLIAM HOWARD.

WILLIAM T. BIRTLES.

To the Sanitary Authority of the Borough of Accrington.

GENTLEMEN,

I have the honour to submit for your consideration my Report on the Health and Sanitary condition of the Borough for the year ending December 31st, 1909.

During the year out of the total 679 deaths, 53 have been certified as due to "old age," and 134 have lived beyond the allotted span of three score years and ten, while 337 have reached beyond 50 years of age.

The corresponding figures for the last eight years are as under :—

Year.	Total Deaths.	Certified as "Old Age."	All Causes. Over 70.	All Causes. Over 50.	Percentage. Over 50.
1909	679	53	134	337	49%
1908	662	31	103	271	41%
1907	663	43	103	326	49%
1906	602	30	98	265	44%
1905	599	30	84	251	42%
1904	699	31	106	286	41%
1903	647	32	79	254	39%
1902	598	31	90	264	44%
1901	706	39	89	267	37%

The year 1909 has not been a period in which any very important new developments in sanitary administration have taken place within the Borough ; nevertheless, all the departments directed to the health and cleanliness of the town have continued to work in a satisfactory manner, and the mortality statistics for the year compare very favourably with those of other Lancashire towns of a similar size.

I am glad to notice that Mr. Diggle's improved ashbin is finding great favour, not only with the builders of new property, but also where alterations have to be made to old property this more sanitary arrangement is being adopted. It means a great deal to the general health of the town to have all refuse quickly and quietly collected and destroyed ; the new ashbin not only facilitates this, but also enables the scavengers to do this work in a much more cleanly, less laborious, and more thorough manner.

The collection and disposal of the horse middens in the residential parts of the Borough, is, I believe, capable of great improvement. That they form a nuisance to houses in their neighbourhood is beyond doubt, and I frequently receive complaints about them. The Sanitary Inspectors of course visit these places, and, after some delay, manage to get the offensive matter removed, but it would be far better to prevent the nuisance from occurring by a systematic collection. The money spent on flycatchers during the summer months would go a long way towards the expense of horses and carts to pay regular visits to all the stables in the residential parts of the Borough for the purpose of removing the breeding places of these dangerous and pestiferous creatures.

The medical inspection of school children and school buildings has gone on according to the requirements of the Education Code for 1909. In carrying out this work, I have been very greatly assisted by the School Attendance Officers. Mr. Longton has been with me during almost the whole of my visits to the schools, has weighed and measured the children, written the notes on the cards used for recording the condition of each child, transcribed these results into a letter to the parents setting forth any defects found, and, with the help of his assistant Officers, the parents have received the result of the examination of their children within 24 hours of the inspection.

A weighing machine, and standard for measuring the height, is now placed in each of the Elementary Schools in the Borough.

So far, only the children entering school and those qualified to leave school have been inspected, that is to say, children under six years and children 13 years and over. During 1910, in addition to these two groups, a further intermediate group will be subjected to inspection.

The inspection of school buildings in a few instances revealed defects in ventilation which, when brought to the notice of the Education Authority were speedily remedied.

I am convinced that a great deal of good will result from this inspection, defects in the children and school buildings which otherwise might never be revealed are brought to the notice of the parents and Education Authority, and in this way the first step towards remedy is taken.

As yet, I can give no certain indication as to the number of cases in which remedial measures have followed the pointing out of defects to the parents, but I have reason to believe that they have been considerable.

The total number of deaths from Zymotic Disease has been considerably below average.

Scarlet Fever for the first time on record does not claim a single death, in 1908 only one death was recorded as due to this cause.

Typhoid Fever has been responsible for eight deaths out of fifteen notified cases, while Whooping Cough, of which there was a considerable prevalence during the year, is also credited with eight deaths.

With the exception of Small-pox, from which we have been free since the end of 1905, we have no hospital for the isolation and treatment of Infectious Diseases. In previous reports, I have pointed out that our case death-rate from Typhoid Fever is very excessive and suggested the necessity of providing hospital treatment for this and other Infectious Diseases where the circumstances of the household make it advisable in the interest of the patient and the community that the sufferer should be removed.

There has been no change in the Staff of the Health Department during the year, and the several Officers have attended to their duties in a very satisfactory manner.

To the Town Clerk, the Borough Engineer, the Chief and Assistant Sanitary Inspectors, and the Chairman and Members of the Health Committee, I am indebted for many kindnesses during the year.

I have the honour to be, Gentlemen,

Your obedient Servant,

ARTHUR GREENHALGH.

Population.

The statistics contained in this Report are based upon a population of 46,500, which I estimate would be the population of the Borough at the middle of the year 1909.

I notice that the Registrar General calculates the population of Accrington in the middle of 1909 to be 47,274, that is, 774 higher than my estimation. Not until the census is taken in 1911 shall we ascertain which figure is the more accurate. If my estimate is lower than the actual number it will cause the death-rates in this report to appear higher than they really are, this is preferable to an error in the opposite direction.

A copy of the Census returns of 1901 appears below.

LOCALITY.	HOUSES.				POPULATION.		
	In-habited	Un-inhabited.		Build-ing.			
		Not in Occu-pation.	In Occu-pation.		Persons.	Males.	Fe-males.
North-East Ward ..	2456	150	29	71	11001	5190	5811
South-East Ward ..	1736	93	42	9	7858	3789	4069
South-West Ward ..	2983	123	49	25	13346	6312	7034
North-West Ward ..	2340	85	30	63	10917	5237	5680
Accrington.....	9515	451	150	168	43122	20528	22594

Population in Census year	1881.....	31,435
" "	1891.....	38,603
" "	1901.....	43,122
Increase of population in the ten years	1881-1891..	7,168
" " "	1891-1901..	4,519
Number of occupied houses in	1881	6,396
" "	1891	8,155
" "	1901	9,515
Number of new houses certified ready for occupation		
during	1908	116
" " during	1909	94

Average number of persons in each house in 1881..	4.9
" " " " 1891..	4.7
" " " " 1901..	4.5
Estimated population to middle of year, 1908..	46,000
" " " " 1909..	46,500

The following table shows the number of new houses certified as fit for occupation during the 19 years 1891-1909, arranged according to the Wards in which they are situated.

YEAR.	North- West Ward	South- West Ward.	North- East Ward	South- East Ward.	TOTAL.
1891	32	77	33	12	154
1892	29	104	40	25	198
1893	45	48	36	4	133
1894	36	57	25	2	120
1895	27	12	47	4	90
1896	60	30	17	6	113
1897	54	31	17	13	115
1898	67	98	67	4	236
1899	51	96	38	9	194
1900	90	90	41	16	237
1901	101	39	75	15	230
1902	97	41	65	12	215
1903	32	52	30	18	132
1904	12	5	23	7	47
1905	29	25	25	3	82
1906	38	23	31	10	102
1907	19	6	23	7	55
1908	27	49	17	23	116
1909	30	46	12	6	94
Total	876	929	662	196	2663

Area.—The area of the Borough, according to the last Ordnance Survey, is 3,426.6 acres, giving a density of 13 persons to the acre. The urban portion of the Borough has a considerably higher density than this, but cannot be estimated with accuracy.

Altitudes.—Altitudes at centre of Town and Boundaries.

	Feet above Sea Level.
Town Hall : Ordnance Bench Mark	441.60
Centre of Street opposite	439.00

Boundaries at :—

Blackburn Road (adjoining Church) :—

Bench Mark on Boundary Stone	413.00
Centre of Road opposite	412.19

Whalley Road (adjoining Clayton) :—

Bench Mark on Boundary Stone	515.00
Centre of Road opposite	513.80

Burnley Road (adjoining Huncoat) :—

Bench Mark on Boundary Stone	563.00
Centre of Road opposite	562.04

Manchester Road (adjoining Baxenden Station) :—

Bench Mark on Boundary Stone	757.00
Centre of Road opposite	755.90

Datum : Mean High Water Mark at Liverpool.

Occupations.—The occupations of the people are of varied character. The staple industries are cotton weaving, cotton spinning, the manufacture of cotton spinning machinery, calico printing, and coal mining. Brickmaking is an industry carried on at several places on the outskirts of the Borough.

A large proportion of the female portion of the population finds employment in the cotton mills of the town.

Trade depression has been felt very keenly during the year, the earnings of the majority of the cotton operatives have been considerably less than their average full-time pay.

Deaths.—648 deaths, 308 males and 340 females, have been registered in the Borough during the year, giving a crude death-rate equal to 13.93 per 1,000 of the estimated population per annum.

12 deaths were “uncertified” either by the Coroner or by a registered medical practitioner, 9 males, 3 females; 37 deaths, 22 males and 15 females, have been certified by the Coroner.

The Report from Miss Horne at the Cemetery, states that she has received for interment 66 infants who have not been born alive.

Death-Rate Corrected.—The total deaths appertaining to the Borough are as follows :—

Deaths occurring in Borough (excluding 22 in the Victoria Hospital, and excluding 5 deaths of non-residents at Railway Station, Avenue Parade, Chapel Street, Wellington Street, and Whalley Road)	621
--	-----

Deaths in Victoria Hospital.....	22
----------------------------------	----

Less deaths of persons in Victoria Hospital residing outside the Borough (non-residents)	12
--	----

Deaths of Accrington residents in Victoria Hospital.....	—	10
--	---	----

Deaths of Accrington residents occurring outside the Borough, viz. :—

Haslingden Union Workhouse, Pike Law	41
Blackburn	1
Halifax	1
Lancaster	2
Manchester.....	2
Preston	1
	— 48

679

giving a corrected death-rate of 14.60 per 1,000 per annum, as against 14.39 for the year 1908.

By the term “non-residents” is meant persons brought into the district on account of illness and dying there, and by the term “residents” is meant persons who have been taken out of the district on account of illness, and have died elsewhere.

SUMMARY OF DEATHS.—TABLE VII.

	Total.	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 65	65 to 70	70 to 80	80 and up	North- West.		South- West.		North- East.		South- East.		RATE PER 10,000.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Zymotic Diseases include Smallpox, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Membranous Croup, Enteric Fever, Zymotic Enteritis, and Erysipelas.

Before the year 1900, the deaths of Accrington residents occurring in the Haslingden Union Workhouse were not taken into consideration in calculating the annual death-rates of the Borough. The Local Government Board, however, desired this to be done, consequently, in calculating the death-rate for the present year, 41 deaths have had to be included which, before 1900, would have been neglected.

The following were the death-rates for England and Wales during 1909 :—

England and Wales	14.5 per 1,000 living.
76 Great Towns	15.6 „
143 Small Towns	14.5 „
England and Wales (less the 219 Towns)	13.6 „
Crude annual death-rate per 1,000	13.93
Corrected „ „ (including 48 deaths outside the Borough, and excluding 12 non-residents at the Victoria Hospital, and 5 others).....	14.60
Births :—Males	480
Females	466
	———— 946
Deaths	679
	————
Excess of births over deaths	267
Deaths of infants under 1 year of age.....	117
Giving an infant mortality per 1,000 births of....	123.68

The following table gives the recorded death-rate for the last 31 years :—

Year	Mortality per 1,000	Year	Mortality per 1,000
1879	21.07	1894	12.98
1880	19.22	1895	17.82
1881	17.65	1896	15.54
1882	22.26	1897	16.78
1883	19.24	1898	15.35
1884	19.30	1899	14.61.
1885	16.80	1900	15.23 corrected
1886	17.40	1901	16.33 corrected
1887	17.70	1902	13.74 corrected
1888	16.70	1903	14.70 corrected
1889	20.20	1904	15.77 corrected
1890	16.60	1905	13.43 corrected
1891	20.20	1906	13.37 corrected
1892	17.35	1907	14.57 corrected
1893	17.24	1908	14.39 corrected
		1909	14.60 corrected

The following table shows the seasonable distribution of deaths, including deaths of 48 Accrington "residents" occurring at Pike Law, etc., and excluding 12 deaths of "non-residents" in Victoria Hospital, and 5 others.

MONTH.	MALES.	FEMALES.	TOTAL.
January	25	30	55
February	30	38	68
March	42	53	95
April.....	27	30	57
May	25	24	49
June	12	21	33
July.....	18	23	41
August	17	21	38
September	18	27	45
October.....	24	27	51
November.....	32	24	56
December	53	38	91
	323	356	679

Births.—946 births—480 males, 466 females—have been registered, giving a birth-rate equal to 20.34 per 1,000 per annum.

The Birth-rate for 1910 is the lowest ever recorded, but it is satisfactory to note that the Infant Mortality is very sensibly lower than the average.

The birth-rates in 1909 for England and Wales were as follows :—

England and Wales	25.6	per 1,000 living.
76 Great Towns	25.7	„
143 Smaller Towns	24.8	„
England and Wales (less the 219 Towns)	25.6	„

The birth-rate per 1,000 living, at all ages, for the last 28 years is shown below :—

Year.	Birth Rate.	Year.	Birth Rate.
1882	37.4	1896	27.1
1883	33.7	1897	24.97
1884	43.4	1898	23.98
1885	32.7	1899	23.25
1886	29.2	1900	24.67
1887	30.5	1901	24.84
1888	31.5	1902	23.58
1889	28.3	1903	21.95
1890	27.1	1904	22.64
1891	20.6	1905	20.78
1892	28.6	1906	21.68
1893	28.8	1907	22.59
1894	27.8	1908	22.00
1895	27.0	1909	20.34

The following Table shows a comparison of the Birth-rates and Infant Mortalities of the whole Borough, and of the Wards separately, together with an average, for the last nine years.

YEAR.	ACCRINGTON.		North-West Ward.		South-West Ward.		North-East Ward.		South-East Ward.	
	Birth rate.	Infant M'tality.	Birth rate.	Infant M'tality.	Birth rate.	Infant M'tality.	Birth rate.	Infant M'tality.	Birth rate.	Infant M'tality.
1901....	24.84	159.21	24.49	164.17	23.54	133.33	24.93	185.44	27.42	157.40
1902....	23.58	130.60	23.16	125.49	23.31	127.38	23.42	115.38	24.85	162.43
1903....	21.95	130.43	21.77	157.02	22.86	125.00	21.75	106.55	20.93	136.90
1904....	22.64	148.55	23.26	176.92	22.97	139.24	22.86	147.28	20.90	124.26
1905....	20.78	137.00	21.00	148.30	21.13	133.10	20.93	134.45	19.67	131.25
1906....	21.68	132.17	19.94	145.37	22.07	103.89	22.53	146.71	22.26	142.85
1907....	22.59	107.00	21.62	80.32	22.02	122.58	24.09	106.76	22.79	117.02
1908....	22.00	137.35	22.41	168.62	23.25	114.46	18.56	133.03	24.11	139.30
1909....	20.34	123.68	21.04	145.16	21.26	136.36	18.59	100.00	20.25	100.00
Average..	22.24	134.18	22.06	146.04	22.48	126.07	21.93	131.38	22.55	135.67

BIRTHS REGISTERED, 1909.

1909	MONTH.	North-West Ward.				South-West Ward.				North-East Ward.				South-East Ward.			
		Legitimate.		Illegitimate.		Legitimate.		Illegitimate.		Legitimate.		Illegitimate.		Legitimate.		Illegitimate.	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
January	8	14	..	1	14	13	1	1	12	6	..	..	7	9	..	..
February	..	16	11	..	..	11	15	..	..	5	4	..	..	9	6	1	..
March	14	12	1	1	17	11	..	..	12	14	1	1	5	5	..	..
April	13	16	..	..	19	8	..	..	9	6	..	..	5	8	..	..
May	5	14	1	..	9	12	..	..	10	9	..	..	7	4	..	..
June	11	10	..	2	12	17	1	..	8	6	1	2	9	6	..	..
July	10	16	1	..	9	7	..	1	5	9	..	..	14	10	..	..
August	11	8	1	..	17	19	..	..	7	13	..	1	6	4	1	..
September	..	8	3	..	..	12	12	..	..	10	8	..	..	9	2	..	..
October	6	8	..	..	12	10	2	..	12	11	1	1	5	9	..	..
November	..	5	9	..	1	15	13	..	1	8	11	..	..	5	8	1	..
December	..	9	2	..	..	9	8	..	..	11	7	..	1	7	8	..	..
		116	123	4	5	156	145	4	3	106	105	3	6	88	79	3	..

Total Births 248

Birth-rate 21.04

Infant Mortality 145.16

Death-rate 15.10

.. 308

.. 21.26

.. 136.36

.. 14.98

.. 220

.. 18.59

.. 100.00

.. 13.26

.. 170

.. 20.25

.. 100.00

.. 15.13

Natural Increase of Population.—The excess of births over deaths is 267. The corresponding figures for the last seventeen years are :—

Year.	Increase.	Year.	Increase.
1892	438	1901	368
1893	456	1902	428
1894	525	1903	319
1895	380	1904	304
1896	485	1905	328
1897	348	1906	374
1898	372	1907	365
1899	382	1908	350
1900	426	1909	267

Infant Mortality.—The Notification of Births Act, 1907, has not been adopted ; application was made, but was refused by the Local Government Board on the ground that no Lady Health Visitor was employed.

Cards of instruction on the care and feeding of infants are distributed to houses where a birth occurs, and in some cases are the means of doing much good, but it is not reasonable to expect that they can compare in efficiency with the personal attention which a suitably constituted and qualified lady would be able to give to children whose feeding and care is often an exceedingly difficult and trying problem. In a very considerable proportion of cases mothers do not feed their babies at the breast, which is of course the natural and best way. In many instances, this is due to absence or poverty of supply, but in a not inconsiderable number of cases, it is by preference that bottle feeding is adopted.

Table V shows an analysis of the certified causes of death in children under one year of age, from which we learn that more than a quarter of the deaths are due to Premature Birth or Congenital Defects, and that more than half of the total number of deaths occur before the completion of the third month of life. Pneumonia has been responsible for 24 deaths, faulty methods of clothing may have been responsible in some of these cases. The deaths from Diarrhœal diseases have this year been comparatively few, owing no doubt to the very cool summer, delaying putrefactive changes in the milk or other preparations used in the feeding bottles for the nourishment of infants.

The Infantile Death-rates for England and Wales during 1909 were as follows :—

England and Wales	109	per 1,000 Births.
76 Great Towns	118	„
143 Smaller Towns	111	„
England and Wales (less the 219 Towns)	98	„

For the last nineteen years the Infant Mortality has been :—

Year.	Mortality.	Year.	Mortality.
1891	151.8	1901	159.21
1892	138.0	1902	130.60
1893	190.3	1903	130.43
1894	122.0	1904	148.55
1895	192.3	1905	137.00
1896	171.4	1906	132.17
1897	187.38	1907	107.00
1898	201.15	1908	137.35
1899	178.98	1909	123.68
1900	144.65		

Zymotic Diseases.—The principal Fevers have caused 35 deaths as against 84 in 1908.

The Zymotic death-rate works out at .75 per 1,000 of the population per annum.

The number of deaths from the principal Fevers have this year been comparatively few, all told they amount to 35, which, with the exception of the year 1905, when the number was 29, constitutes a record.

Typhoid Fever has caused eight deaths ; Whooping Cough the same number, and of these, seven have been in children under the age of three years. Over and over again, I have insisted on the exceeding great importance of protecting young children from coming in contact with another child suffering from this very serious disease, but yet in some houses it is looked upon as a trifling complaint which all children must sooner or later have, and this false belief has lead misguided parents to encourage the contact of one sufferer with another child in the household, who has not previously suffered from the complaint, in order to save time and get the thing done with. When the second child happens to be of tender years, fatal results follow in a large proportion of cases.

The adjoining Table shows the number of deaths from this class of disease for the last fifteen years, and Table VI. at the end of the Report shows the number of cases notified, and the deaths resulting therefrom of the seven notifiable diseases.

The Zymotic death-rates for England and Wales during 1909, were :—

England and Wales.....	1.12
76 Great Towns	1.42
143 Smaller Towns	1.08
England and Wales (less the 219 Towns) .....	.80

The number of deaths from the Principal Zymotic Diseases for the last 15 years is as under :—

DISEASES.	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Scarlet Fever	9	8	9	11	10	4	9	4	21	6	4	4	3	1	..
Measles	15	6	20	30	2	21	21	4	35	25	4	13	8	31	5
Enteric Fever	13	10	5	13	4	7	8	6	8	7	6	6	8	4	8
Erysipelas.....	4	3	4	3	..	1	2	2	3	1	2	1	..	1	3
Zymotic Enteritis	59	28	31	30	57	29	32	3	11	10	5	18	4	19	4
Whooping Cough	7	21	8	8	9	13	4	16	1	14	..	12	6	19	8
Diphtheria															
Membranous Croup....	6	2	6	7	6	10	3	6	4	2	7	10	9	9	7
Smallpox .....	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..
	113	78	83	102	88	85	79	41	84	65	29	64	38	84	35

Scarlet Fever.—The number of cases notified has been as follows :—

	Borough	N.W.	S.W.	N.E.	S.E.
Cases notified.....	180	46	60	47	27

Although there has been a considerable prevalence of this disease, 180 cases notified, it has been of a mild character, no deaths at all have been certified as due to this cause. During the last five years only 12 deaths have resulted from Scarlet Fever.

In many instances, great difficulty is found in procuring even a reasonable attempt at isolation, and in some cases where a business is carried on, it is impossible; in these circumstances when funds have not stood in the way, patients have been removed to the isolation hospitals at Blackburn or Burnley, and when this could not be done, in a very few cases accommodation has been found in the house of a relative where isolation could be provided. This latter arrangement has sometimes lead to friction with neighbours.

Hospital isolation is not practised in the Borough; isolation at home is advised, and an assistant visits the houses notified, and conveys printed instructions. Children from the houses affected are excluded from school, and disinfection of rooms and bedding, etc., is carried out after the recovery of the patient.

Enteric Fever.—Typhoid Fever has been certified as the cause of eight deaths out of 15 cases notified. The details as to Wards are as follows :—

	Borough.	N.W.	S.W.	N.E.	S.E.
Cases notified.....	15	2	3	6	4
Deaths.....	8	..	3	4	1

The number of deaths per year from this disease during the last twenty years averages about seven. The accompanying Table shows, however, that its prevalence

during recent years has been greatly reduced. It would have been much more gratifying if the number of deaths due to it had shown a diminution corresponding to its diminished incidence. The reduction in the number of cases notified is in all probability due to the greater care taken to immediately destroy the excrements of patients suffering from the disease. A suitably constructed galvanized iron pail is taken to the houses where an outbreak occurs, together with a plentiful supply of antiseptics, these pails are collected very regularly and the dejecta destroyed by fire.

For some years past, the three District Nurses have been allowed to give their very valuable assistance in the nursing of Typhoid Fever, greatly to the comfort of the sufferers, and to the safety of the other persons in the household whose duty has called them to act as attendants on the sick. No doubt a considerable amount of the reduction in the incidence of the disease is referable to the introduction of the Nurses into the household. Without suitable surroundings (abundance of fresh air and absolute control over the diet) which the successful treatment of this disease, perhaps more than any other, imperatively demands, it may be expected with certainty that the case mortality from this complaint will continue to be, as at present, altogether too high.

Period.	Notified.	Case mortality	
		Deaths.	per cent.
1891 to 1895..	298	38	12.7
1896 to 1900..	222	39	17.5
1901 to 1905..	143	35	24.4
1906.....	20	6	30.0
1907.....	22	8	36.3
1908.....	22	4	18.2
1909.....	15	8	53.3
	<hr/> 742	<hr/> 138	<hr/> 18.6

Diphtheria.—24 cases of Diphtheria and Membranous Croup have been notified during the year, and seven deaths have resulted therefrom, five of the seven being in children under the age of five years.

A stock of Anti-Diphtheritic Serum is kept at the Police Station for the convenience of the doctors called to attend this disease. This very excellent preventive agent, like many other good agents, is of little avail unless it is used early enough in the course of the disease. The fatal cases are generally those in which the doctor has been called in too late, thus giving the poison time to get into the system.

The Health Committee have undertaken to consider the payment for Serum used in necessitous households, so that expense need not stand in the way of this very useful agent being applied whenever the doctor thinks it advisable.

Phthisis.—Out of a total of 679 deaths, Tuberculous disease of all kinds has been responsible for 52 deaths. The subjoined Table shows the number of deaths certified as due to all forms of this disease during the last ten years.

1900	.....	58
1901	...	65
1902	.....	68
1903	.....	64
1904	.....	72
1905	.....	53
1906	.....	55
1907	.....	60
1908	.....	59
1909	.....	52

In all cases of this disease where a death has occurred, and in any other cases where the doctor in attendance desires it, disinfection of the bed and bedroom is carried out by the Health Authority without charge of any kind.

The following Table shews the death-rate per 10,000 persons living in each of the four Wards of the Borough, together with the average for the last ten years.

YEAR.	RATES PER 10,000.			
	North-West.	South-West.	North-East.	South-East.
1900.....	18.5	15.1	10.9	7.6
1901.....	20.1	5.9	13.6	25.3
1902.....	16.3	14.8	15.3	16.3
1903.....	18.8	12.4	13.3	13.7
1904.....	19.6	12.3	15.9	18.5
1905.....	16.0	11.5	9.6	9.8
1906.....	14.0	9.3	13.9	12.2
1907.....	17.3	9.9	14.5	10.9
1908.....	14.6	11.9	11.9	13.2
1909.....	11.0	10.3	7.6	17.8
Average for 10 years 1900-9 ..	16.6	11.3	12.6	14.5

In allocating to their Wards the deaths occurring in the Workhouse at Pike Law, a large proportion of which are of persons who have had residence in one or other of the lodging houses of the Borough, I have adopted the plan of distributing the deaths of lodging house residents as equally as possible to the four Wards in proportion to the number of inhabitants in each Ward.

There are four common lodging houses in the Borough, the largest, situated over Bull Bridge, is in the North-West Ward, and three smaller ones, Oak Street and Cross Street, in South-East Ward, and Plantation Street in North-East Ward. It seemed to me inadvisable to allow these three Wards to take the responsibility of the whole of the deaths occurring in these places, so that when no other residence than one or other of the lodging houses is given, the deaths have been equally distributed to each and all of the four Wards. I was led to do this by finding that a heavy percentage of deaths at Pike Law of residents from these lodging houses were certified as due to Tuberculous Disease, and the allocation of the whole of these deaths to only three Wards caused the death-rate from this form of disease to show higher than the general hygienic conditions of the Ward warranted.

In the case of death occurring in the Workhouse coming from a private residence, the Ward in which that residence occurs has been made responsible for it.

The voluntary notification of Tuberculosis is not at all satisfactorily carried out in the borough—we have no arrangement for isolation. The question of doing something more than disinfection in the battle with this disease has engaged the attention of the Health Committee on some two or three occasions, but as yet, no further progress has been made, beyond improvements in general hygiene of the borough.

If we take the total number of deaths from all forms of this disease for the last ten years, we find that they add up to 606 ; but while the first half of this period claims 327, or just over 65 per year, the second five years claims 279 or an average of just over 55 per year, so that in spite of an increase in the population of over 3,000, we are saving about ten lives per year in the later years of this period.

This improvement is due, I take it, to the better conditions and better habits of the people generally. Workshops and workplaces are more healthy, our schools have vastly improved during the last ten years, people go out for walks in the country much more frequently than formerly, and there is even some improvement in the ventilation of bedrooms which I believe would be very much better attended to if a greater check was put upon the smoke nuisance.

Since the institution of Regulations under the Dairies, Cowsheds, and Milkshops Order, very great improvements have been made in the conditions under which the majority of the milch cows are kept within the borough, and this good work is still in progress.

Add to all these and not less important than any of them, the consumption of alcohol is on the decrease; the debility and lack of resistance in the tissues of the body brought about by indulgence in alcohol gives the tubercle bacillus, that is the seed of the disease, just the opening it wants, and it matters not very much whether a person is the offspring of consumptive parents or not, the seed will grow when the resisting power has, from any cause, been reduced below a certain standard.

Cancer.—Malignant Disease has caused 45 deaths this year, as against 48, 32, 33, 33, and 38 in each of the five preceding years.

As in the case of Diphtheria, and in fact all other diseases, the effective treatment of malignant disease is dependent on early diagnosis. When this is done in cases of Cancer, and followed by a free removal by surgical means, the surgeon can claim a very large percentage of cures from this insidious disease.

Analysis of the deaths from Malignant disease, showing Sex, Age, Ward, and region of the body affected.

REGION AFFECTED.	Total.	30 to 35	35 40	40 to 45	45 50	50 to 55	55 to 65	65 to 70	70 to 80	80 and up	WARDS.							
											North- West		South- West		North- East		South- East	
											M	F	M	F	M	F	M	F
Cancer of—																		
Face & Lower Jaw	2	..	..	..	..	..	I	..	I	..	..	..	..	..	..	..	..	..
Tongue & Throat	2	..	..	..	I	I	I	..	..	2	..	..	..	..	..	..	..	..
Oesophagus	3	..	..	I	..	..	I	I	3	I	..	I	2	..	..	..	..	..
Stomach	6	..	..	I	..	..	..	I	I	..	..	I	I	..	..	..	..	..
Pancreas	2	..	..	I	..	..	..	I	I	..	..	..	I	..	..	..	..	..
Intestines	4	..	..	..	..	..	2	I	I	..	..	..	..	I	..	..	I	..
Liver	5	I	..	..	..	..	2	I	..	I	..	..	2	..	..	..	I	I
Uterus	4	..	I	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..
Vagina	I	..	..	..	..	..	I	..	..	..	..	..	..	I	..	..	..	..
Ovary	I	..	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..	..
Bladder	I	..	..	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..
Breast	8	..	I	I	I	2	I	I	I	..	..	..	..	..	..	4	..	2
Foot	I	..	..	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..
Cancer (region not specified)																		
Lympho-Sarcoma	3	..	..	..	..	I	I	..	I	..	..	..	..	I	..	..	..	..
Sarcoma	I	..	..	..	..	I	..	..	..	..	..	..	..	..	..	..	..	..
	45	I	2	3	2	6	15	6	9	I	7	7	3	II	4	2	3	3

Water Supply.—The supply of Water to all parts of the borough has been continuous and no interruptions of any moment have occurred through breakages. The Board's Reservoirs are at a higher level than has been the case for many years, owing to the excessive rainfall. During the year ending December 31st, a register of rainfall was recorded on 194 days on the immediate boundary of the borough and the total volume reached 47.81 in. against 42.49 in. for 1908, and 41.74 in. for 1907. The quantity of water in the Reservoirs on February 28th, 1910, is reported to be 398 $\frac{3}{4}$ million gallons against 281 million gallons at the same period last year, which ensures an ample supply for some time to come. The new Altham Pumping Station continues to supply an abundance of water, which is allowed to flow into the Burnley Road Reservoir, and to diminish the hardness of this source of supply, the Water Authority have caused the water to traverse a conduit for æration, and assimilation with the Burnley Road water, which is of a softer quality. Samples of the local supply are frequently taken and analysed.

Disposal of Excrement.—The sewage of the Borough is dealt with by the Accrington and Church Outfall Sewerage Board at their works at Coppy Clough. A description of this may be found in my Report for the year 1900.

Destructors.—Information under this head is given in detail in the Sanitary Inspector's Report.

Disinfecting Apparatus.—The Steam Disinfecting Apparatus continues to work satisfactorily.

Abattoirs.—The Public Abattoirs are regularly inspected and are under the constant care of one of the Corporation workmen. The Sanitary Inspector's Report gives details of the destruction of carcases that have been considered unfit for human food.

The stalls on the Market Ground receive regular attention from the Sanitary Inspector, and his Report gives full details of the action taken during the year against persons offering unwholesome food for sale.

Dairies, Cowsheds, and Milkshops.—The effect of the Regulations under the Dairies, Cowsheds, and Milkshops Order, which came into operation in 1901, has been to produce a great improvement in many of the Cowsheds of the Borough, and every summer sees further changes in this direction.

Factory and Workshop Acts.—Frequent visits are made to the Factories and Workshops to ascertain their condition as far as the matters under the supervision of the Local Authority are concerned.

Notifications under Sections 5 and 14 of the Factory and Workshop Act, 1901, have been received from H.M. Inspector, as follows :—

FOUNTAIN MILL :—

“Insufficient means of escape in case of fire.” An extra exit was provided, leading from weaving shed.

3 PICCADILLY :—

“One sanitary convenience for both sexes. Separate accommodation should be provided at an early date.” Separate accommodation for the sexes was provided.

44 NUTTALL STREET :—

“Strong smell of gas in bakehouse, apparently arising from a leakage.” A new gas meter remedied the nuisance.

21 CHURCH STREET :—

“Workrooms appear to require cleansing and lime-washing.” The workrooms were cleansed and lime-washed.

17 PARK STREET :—

“Sanitary convenience not provided.” Satisfactory arrangements were made.

PARK STREET (INGHAM'S) :—

“Sanitary convenience in an unsuitable condition, there being no satisfactory water flush, and place in a filthy state.” A new pedestal closet with proper flushing arrangements attached was fixed.

41 BLACKBURN ROAD :—

“Flueless stove (gas) used for heating workroom ; to provide means for the removal from workroom of the fumes arising therefrom.” Arrangements were made with the occupier to either discontinue using workroom, or provide other means of heating.

KING STREET (ROYSTON) :—

“Workshop appears to require lime-washing.” The workshop was limewashed.

136 BLACKBURN ROAD. :—

“Workroom appears to require linewashing.” The workroom was limewashed.

43 LISTER STREET :—

“Bakehouse appears to require linewashing.” The bakehouse was limewashed.

12 PEEL STREET :—

“Separate sanitary conveniences not provided for the sexes (3 males and 3 females employed).” Satisfactory arrangements were made.

3 DUTTON STREET :—

“Workroom does not appear to be sufficiently ventilated.” Windows were made to open.

KEARNS, ALLAN & CO., BAXENDEN :—

“The sanitary accommodation used by the women is unsuitable in that no doors and fastenings are provided. Conveniences were found insanitary and insufficiently ventilated.” The sanitary conveniences were provided with doors and fastenings.

BACK VICTORIA STREET (GREENHALGH) :—

“ Bakehouse : limewashing overdue.” The bakehouse was limewashed.

2A PEEL STREET :—

“ Only one sanitary convenience for both sexes, (3 females and 8 males employed).” A separate closet was provided for females.

WOOD STREET (ATKINS) :—

“ The sanitary convenience is in an unsatisfactory state, and the surroundings are dirty.” A new water closet was provided.

BACK OWEN STREET (LAUNDRY) :—

“ The sanitary convenience for women is insanitary and not provided with separate door and fastenings.” Separate door and fastenings were provided.

HAGG WORKS :—

“ The sanitary conveniences used by the women are unsuitable in that they are not provided with doors.” The conveniences were provided with doors.

KEARNS, ALLAN & CO., BAXENDEN :—

“ Sanitary convenience used by the women was found in an insanitary condition. It does not appear to be sufficiently often scavenged.” Arrangements were made for the conveniences to be more frequently scavenged.

14 NELSON STREET :—

“ Sanitary convenience ventilates into workshop.” A ventilator was fixed in outside wall.

The following is a copy of the official form required by the Home Office as to the proceedings taken in connection with the supervision of Factories, Workshops, etc.

1.—INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS
OF NUISANCES.

PREMISES.	Number of		
	Inspections.	Written Notices.	Prosecutions.
FACTORIES (Including Factory Laundries).	65	.	..
WORKSHOPS (Including Workshop Laundries).	158	3	..
WORKPLACES	62	..	..
TOTAL	285	11	..

2.—DEFECTS FOUND.

PARTICULARS.	Number of Defects			Number of Prosecutions.
	Found	Re-medied	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts :—				
Want of Cleanliness.....	3	3	..	..
Want of Ventilation	1	1	..	..
Overcrowding .....	..	..	..	..
Want of Drainage of Floors .....	..	..	..	..
Other Nuisances	2	1	..	..
Sanitary accommodation { Insufficient	4	4	..	..
{ Unsuitable or Defective ..	6	6	..	..
{ Not separate for sexes	3	3	..	..
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground Bakehouse (S. 101) .....	..	..	..	..
Breach of special Sanitary requirements for Bakehouses (SS. 97 to 100)	2	2	..	..
Other offences .....	..	..	..	..
TOTAL	21	20	..	..

CLASS.		NUMBER.		
3.—HOME WORK.		Lists	Outwk's	
			Con-tractors	Work-men
Lists of Outworkers, (Section 107):—				
Lists received: Twice in the year		20	8	34
,, Once in the year		4	1	4
Addresses of Outworkers forwarded to other Councils ....		..		26
Number of Inspections of Outworkers' Premises .....		..		27
Outwork in Unwholesome Premises (Sec. 108):—				
Instances.....				..
Notices served .....				..
4.—REGISTERED WORKSHOPS.				
Workshops on the Register (S. 131) at the end of the year.				
Important classes of workshops, such as workshop bake-houses, may be enumerated here.	Bakers, Confectioners		40	
	Dressmakers, Milliners, &c.		87	
	Tailors, &c.		24	
	Cloggers, Bootmakers, &c.		56	
	Other Workshops		130	
Total number of Workshops on Register			337	
5.—OTHER MATTERS.				
Matters notified to H.M. Inspector of Factories:—				
Failure to affix Abstract of the Factory and Workshop Act (S. 133) .....			..
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)		Notified by H.M. Inspector	19	
		Reports (of action taken) sent to H.M. Inspector	27	
Other .....			..
Underground Bakehouses (S. 101):—				
Certificates granted during the year .....			..
In use at the end of the year			7	

The following is a more detailed list of the various Workshops in the Borough.

Bakers, Confectioners, etc.....	40
Dressmakers, Milliners, etc.....	87
Tailors.....	24
Bootmakers, Cloggers, etc.....	56
Hosiers	4
Brush-makers.....	3
Harness-makers.....	4
Cycle and Motor repairers.....	4
Cabinet-makers, Joiners, etc.....	28
Wood Carver	1
French Polishers, Upholsterers	7
Plumbers	5
Painters	7
Masons	2
Smiths.....	11
Wheelwrights.....	6
Refrigerator Maker	1
Picture Framers.....	2
Jewellers.....	3
Photographers	3
Sugar Boilers.....	2
Cooper.....	1
Tinsmiths	2
Chemical Manufacturers	6
Paper Bag Maker.....	1
Rag Sorter	1
Waste Dealer	1
Beer Bottler	1
Cordials and Herb Beer Makers.....	2
Fish Curer	1
Tripe Boilers	7
Gut Scrapers	3
Piano Repairer	1
Christmas Card Dealers	3
Machinist	1
Florists	3
Weighing Instrument Repairer	1
Gas and Water Meter Repairer	1
Ropemaker.....	1
Laundry	1

Observations.—The annexed Table gives the chief items in the mortality statistics of several towns about the size of Accrington, and also those of some of our neighbours.

As most of the figures in the Table are based upon calculations which have for their foundation the estimated population at the middle of 1909, and this estimation commences with a census taken so far back as 1901, it is easy to see that quite serious errors may occur.

Among the things I would most strongly recommend to the attention of the Council are improvements in the Smoke nuisance and in the collection of horse middens and such like refuse.

ARTHUR GREENHALGH,

Medical Officer of Health.

Table showing Birth and Death Rates in certain Towns in 1909.

NAME.	Population.	Birth Rate.	Death Rate.	Infants' Deaths per 1000 Births.	Zymotic Death Rate.	Respiratory Death Rate.	Phthisis Death Rate.	Death Rate from other forms of Tuberculosis.	Malignant Disease Death Rate	Average Death Rate for 10 years, 1899-1908.
Ashton-under-Lyne.....	46225	23.1	18.0	164	1.7	3.8	1.6	.02	.6	20.8
Blackburn.....	136135	23.0	16.4	127	1.5	3.6	.9	.4	.7	17.8
Blackpool	61450	16.70	12.68	103	.99	2.28	.73	.28	.96	13.04
Burnley.....	106267	24.9	16.0	157	1.42	3.83	1.12	.58	.55	18.9
Bury.....	59234	20.61	16.29	129	.98	3.85	1.19	.33	.96	17.07
Burton-on-Trent	53500	22.6	12.3	100	.45	1.79	1.21	.46	.74	..
Carlisle	50675	22.6	13.9	125	.5	2.3	1.26	.3	1.1	16.5
Clitheroe	13000	22.0	13.6	83	.92	1.9	1.2	.8	1.0	14.7
Crewe	48584	23.05	11.9	104	.41	2.79	.6	.37	.84	14.1
Darwen	42668	19.12	14.44	127	1.10	3.40	.82	.26	.94	14.67
Keighley	46450	20.6	13.47	108	.64	2.23	1.07	.49	.66	16.3
Lancaster	44270	21.86	13.07	104	1.12	2.66	.88	.38	.67	13.97
Rochdale	89654	23.0	16.1	101	.64	3.05	1.07	.31	1.09	18.2
Southport	54069	15.46	14.07	103	.26	2.24	.93	.33	.94	15.06
Wigan	93263	30.67	18.28	169	2.47	4.90	.72	.58	.51	20.02
Great Harwood.....										
Clayton-le-Moors	9100	22.4	14.0	117	.7	2.8	1.0	.43	.5	16.0
Church	6950	22.01	15.9	104	.85	3.15	.85	..	1.28	16.4
Oswaldtwistle	15000	23.60	14.86	115	.80	3.26	.40	.33	.60	16.34
Padiham	13900	24.60	14.82	154	.36	2.94	1.08	.14	.64	16.56
Rishton										
Accrington	46500	20.34	14.60	123	.75	3.22	.73	.38	.96	14.75

LOCAL GOVERNMENT BOARD RETURN
TABLE I.—For Whole District.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES. TOTAL.		Deaths in Public Institutions.	Deaths of Non-residents registered in District.	Deaths of Residents registered beyond District.	DEATHS AT ALL AGES. NETT.	
		Number	Rate *	Number	Rate per 1000 Births registered.	Number	Rate. *				Number	Rate. *
1	2	3	4	5	6	7	8	9	10	11	12	13
1899	42357	1028	24.26	184	178.98	646	15.25	..	..	..	..	..
1900	42787	1113	26.01	161	143.75	658	15.37	12	3	32	687	16.05
1901	43223	1074	24.84	171	159.21	689	15.94	27	10	27	706	16.33
1902	43500	1026	23.58	134	130.60	576	13.24	14	10	32	598	13.74
1903	44000	966	21.95	126	130.43	628	14.27	28	13	32	647	14.70
1904	44300	1003	22.64	149	148.55	667	15.05	18	7	39	699	15.77
1905	44600	927	20.78	127	137.00	577	12.93	24	13	35	599	13.43
1906	45000	976	21.68	129	132.17	584	12.97	20	12	30	602	13.37
1907	45500	1028	22.59	110	107.00	633	13.91	33	17	47	663	14.57
1908	46000	1012	22.00	139	137.35	631	13.71	24	16	47	662	14.39
Averages for years 1899-1908.	44126	1015	23.00	143	140.84	629	14.25	..	..	..	..	..
1909	46500	946	20.34	117	123.68	648	13.93	22	17	48	679	14.60

* Rates calculated per 1,000 of estimated population.

Area of District in acres) Total population at all ages..(M 20,528, F 22,594)..... 43,122 }
(exclusive of area 3,426.6 Number of inhabited houses 9,515 }
covered by water) Average number of persons per house 4.5 }

At Census of 1901.

LOCAL GOVERNMENT BOARD RETURN.

TABLE II.

NAME'S OF LOCALITIES.	1.—ACCRINGTON.				2.—NORTH-WEST WARD.				3.—SOUTH-WEST WARD.				4.—NORTH EAST WARD.				5.—SOUTH-EAST WARD.			
	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Death Rate.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Death Rate.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Death Rate.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Death Rate.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all ages.	Death Rate.	Deaths under 1 year.
1899..	42357	1028646	15.25	184	10581	182	17.19	55	13023	169	12.97	44	10886	143	13.13	38	7867	152	19.32	47
1900..	42787	1113687	16.05	161	10759	175	16.25	35	13200	186	14.09	45	10956	185	16.88	46	7872	141	17.91	35
1901..	43223	1074706	16.33	171	10939	187	17.09	44	13381	191	14.27	42	11027	177	16.05	51	7876	151	19.17	34
1902..	43500	1026598	13.74	134	11010	155	14.07	32	13465	168	12.47	40	11098	165	14.68	30	7927	110	13.87	32
1903..	44000	966647	14.70	126	11115	181	16.28	38	13645	182	13.33	39	11215	174	15.51	26	8025	110	13.70	23
1904..	44300	1003699	15.77	149	11176	179	16.01	46	13756	194	14.10	44	11285	193	17.10	38	8083	133	16.45	21
1905..	44600	927599	13.43	127	11235	170	15.13	35	13863	177	12.76	39	11368	148	13.01	32	8134	104	12.78	21
1906..	45000	976602	13.37	129	11379	154	13.53	33	13955	156	11.18	32	11492	166	14.44	38	8174	126	15.41	26
1907..	45500	1028663	14.57	110	11515	160	13.89	20	14073	205	14.56	38	11663	167	14.32	30	8249	131	15.88	22
1908..	46000	1012662	14.39	139	11644	167	14.34	44	14278	190	13.30	38	11742	161	13.71	29	8336	144	17.27	28
Averages of Years 1899 to 1908.	44126	1015651	14.75	143	11135	171	15.35	38	13664	182	13.32	40	11273	168	14.90	36	8054	130	16.14	29
1909..	46500	946679	14.60	117	11788	178	15.10	36	14483	217	14.98	42	11835	157	13.26	22	8394	127	15.13	17

LOCAL GOVERNMENT BOARD RETURN.

Table III.—Cases of Infectious Disease notified during the Year 1909.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.				NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.			
	At all Ages	At Ages—Years.					1	2	3	4	North West Ward.	South West Ward.	North East Ward.	South East Ward.
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65								
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	24	..	11	10	1	2	4	14	2	4	..	..	..	..
Membranous Group		3	..	2	4	16	8	7	6	9	..	..	..	..
Erysipelas.....	30	1	50	97	18	14	46	60	47	27	..	..	..	..
Scarlet Fever	180	..	..	4	2	9	2	3	6	4	..	..	..	..
Enteric Fever	15	..	..	..	3	4	1	1	1	4	..	..	..	..
Puerperal Fever ..	7	..	..	..	..	..	61	85	62	48	..	..	..	..
Totals	256	4	61	113	28	45	5	5	5	5	..	..	..	..

LOCAL GOVERNMENT BOARD RETURN.

TABLE IV.—Causes of, and Ages at, Death during the Year 1909.

CAUSES OF DEATH.	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.						DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES)				Total Deaths in Public In- stitutions in the district	
	All Ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards	LOCALITIES (AT ALL AGES)				
								North- West.	South- West.	North- East.		South- East.
Smallpox .....	..	2	..	..	..	..	..	..	1	2	..	..
Measles	5	..	..	1	..	..	..	..	..	..	2	..
Scarlet Fever .....	..	..	..	..	..	..	..	3	4	1	..	..
Whooping Cough	8	2	6	..	..	..	..	..	5	1	1	..
Diphtheria and Membranous Croup	7	..	5	1	1	..	..	..	3	4	1	..
Enteric Fever	8	..	..	..	1	7	..	..	2	7	3	..
Epidemic Influenza	12	1	..	..	..	5	6	..	1	1	1	..
Diarrhoea	4	2	1	..	..	..	1	1	1	1	1	..
Enteritis	13	6	2	2	1	2	1	4	5	1	3	..
Gastritis	7	5	..	..	..	1	1	3	1	2	1	..
Puerperal Fever	6	..	..	..	2	4	..	..	1	2	3	..
Erysipelas	3	2	..	..	..	..	1	2	1	..	..	..
Phthisis, (Pulmonary Tuberculosis)	34	..	1	3	11	18	1	5	10	6	13	..
Other Tubercular Diseases	18	6	3	..	2	7	..	8	5	3	2	..
Cancer, Malignant Disease	45	..	..	..	..	29	16	14	14	12	5	1
Bronchitis	55	6	3	..	..	16	30	19	18	13	5	..
Pneumonia	80	24	12	5	4	25	10	23	28	16	13	3
Pleurisy	2	..	..	..	1	1	..	..	..	1	1	..
Other Diseases of Respiratory Organs	13	2	2	1	1	3	4	1	6	3	3	..
Alcoholism and Cirrhosis of Liver ..	1	..	..	..	..	1	..	1	..	..	..	..
Veneral Diseases	1	..	..	..	..	1	..	..	..	1	..	..
Premature Birth	19	..	..	..	..	..	..	2	10	6	..	..
Diseases & Accidents of Parturition ..	1	..	..	..	1	..	..	1	..	..	..	..
Heart Diseases	50	..	..	1	1	32	16	17	14	7	12	..
Accidents	13	5	4	..	..	2	2	2	5	4	2	5
Suicides	9	..	..	..	..	9	..	3	3	1	2	..
All other Causes	265	35	10	8	8	95	109	69	80	63	53	13
ALL CAUSES	679	117	51	22	34	258	197	178	217	157	127	22

TABLE VI.
COMPARISON OF PREVALENCE OF SICKNESS AND DEATH
FROM INFECTIOUS DISEASES.

YEAR.	SMALLPOX.		ERYSIPELAS.		DIPHTHERIA.		MEMBRANOUS CROUP.		SCARLET FEVER.		ENTERIC FEVER.		PUERPERAL FEVER.	
	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths	Cases reported	Deaths
1891	..	..	..	2	21	2	..	10	80	6	22	9	..	..
1892	..	..	..	19	88	19	..	4	46	2	23	7	2	2
1893	6	..	1	4	29	4	..	3	34	1	52	6	4	2
1894	2	1	2	3	37	3	..	7	127	2	23	3	..	..
1895	..	..	4	6	31	6	..	11	163	9	178	13	1	..
1896	..	..	3	2	40	2	..	10	177	8	54	10	4	4
1897	..	..	4	6	32	6	..	9	328	9	48	5	5	4
1898	..	..	3	7	38	7	..	3	287	11	52	13	4	2
1899	1	..	..	6	27	6	..	10	398	10	35	4	2	..
1900	..	..	1	6	21	6	..	4	218	4	33	7	1	2
1901	..	..	2	3	13	3	..	..	154	9	25	8	2	2
1902	4	..	2	6	27	6	..	..	115	4	35	6	5	4
1903	43	1	6	4	27	4	2	..	275	21	24	8	2	1
1904	4	..	1	2	13	2	1	..	157	6	30	7	4	1
1905	35	1	2	4	16	4	4	3	84	4	29	6	5	2
1906	..	..	1	7	49	7	3	3	82	4	20	6	3	2
1907	..	..	..	8	42	8	3	1	85	3	22	8	4	4
1908	..	..	1	9	44	9	4	..	232	1	22	4	6	4
1909	..	..	3	6	22	6	2	1	180	..	15	8	7	6

Table V-

LOCAL GOVERNMENT BOARD RETURN.

BOROUGH OF ACCRINGTON.

INFANTILE MORTALITY DURING THE YEAR 1909.

DEATHS FROM STATED CAUSES IN WEEKS AND MONTHS UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	Under 1 Week	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.	North-West Ward.		South-West Ward.		North-East Ward.		South-East Ward.	
																		M.	F.	M.	F.	M.	F.	M.	F.
All Causes :—																									
Certified	21	3	3	4	31	10	14	8	9	3	10	5	10	5	4	2	111	18	16	22	17	12	9	12	5
Uncertified	4	..	..	..	4	..	..	1	1	..	..	..	..	..	..	..	6	1	1	2	1	1	..	..	..
Common Infectious Diseases :—																									
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chickenpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	2	..	..	1	..	..	..	..	1
Scarlet Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria: Croup .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough .....	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2	1	..	..	1	..	..	..	..
Diarrhœal Diseases :—																									
Diarrhœa, all forms .....	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	1	..	..	..	1	..	..
Enteritis, Muco-Enteritis, Gastro-Enteritis .....	..	..	..	..	..	1	1	1	..	1	2	..	..	..	..	..	6	1	1	2	..	1	..	1	..
Gastritis, Gastro-intestinal Catarrh .....	..	..	1	..	1	..	3	..	1	..	..	..	..	..	..	..	5	..	3	..	..	1	..	1	..
Wasting Diseases :—																									
Premature Birth	12	..	..	1	13	3	3	..	..	..	..	..	..	..	..	..	19	1	1	6	4	1	5	1	..
Congenital Defects	8	..	1	1	10	..	..	..	..	..	..	..	..	1	..	..	11	2	2	3	2	..	1	1	..
Injury at Birth .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Want of Breast Milk, Starvation .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Atrophy, Debility, Marasmus	2	2	..	..	4	..	1	..	..	..	..	..	..	..	..	..	5	1	..	2	..	..	..	2	..
Tuberculous Diseases :—																									
Tuberculous Meningitis .....	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
Tuberculous Peritonitis: Tabes Mesenterica .....	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	2	1	1	..	..	..	..	..	..
Other Tuberculous Diseases .....	..	..	..	..	..	1	..	1	1	..	..	..	..	..	..	..	3	..	1	..	..	1	1	..	..
Erysipelas .....	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..	..
Syphilis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) .....	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	2	..	1	..	..	..	..	1	..
Convulsions	1	..	..	..	1	1	1	..	..	..	2	1	..	..	1	..	7	1	1	2	1	1	1	..	..
Bronchitis .....	..	..	1	..	1	..	2	1	1	1	..	..	..	..	..	..	6	1	1	2	2	..	..	..	..
Laryngitis .....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	..
Pneumonia .....	..	1	..	1	2	..	2	2	2	1	4	2	5	3	..	1	24	7	1	4	4	5	..	2	1
Suffocation, overlaying .....	..	..	..	..	..	1	1	1	1	..	..	..	..	..	..	..	4	1	..	..	1	..	..	2	..
Other Causes	2	..	..	..	2	1	..	2	3	..	1	1	1	..	1	1	13	2	1	2	1	3	..	1	3
	25	3	3	4	35	10	14	9	10	3	10	5	10	5	4	2	117	19	17	24	18	13	9	12	5

Population, Estimated to middle of 1909—46,500.

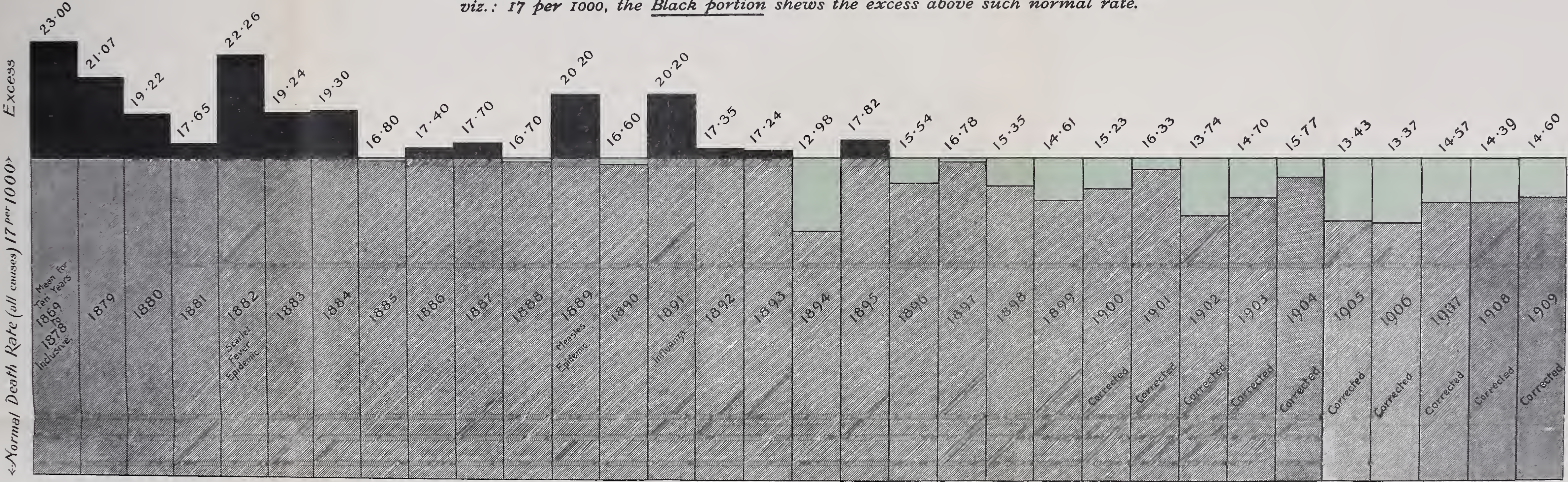
Births in the year: Legitimate.... 918
Illegitimate.... 28Deaths in the year { Illegitimate Infants 112
Legitimate Infants 5
Deaths from all Causes at all Ages.. 679

BOROUGH OF ACCRINGTON.

Diagram shewing Death Rate for Thirty - one Years, 1879 to 1909 inclusive.

REFERENCE.

The Shaded portion of each column represents what the late Dr. Farr considered might be regarded as the Normal Annual Death Rate of a healthy Town, viz.: 17 per 1000, the Black portion shews the excess above such normal rate.



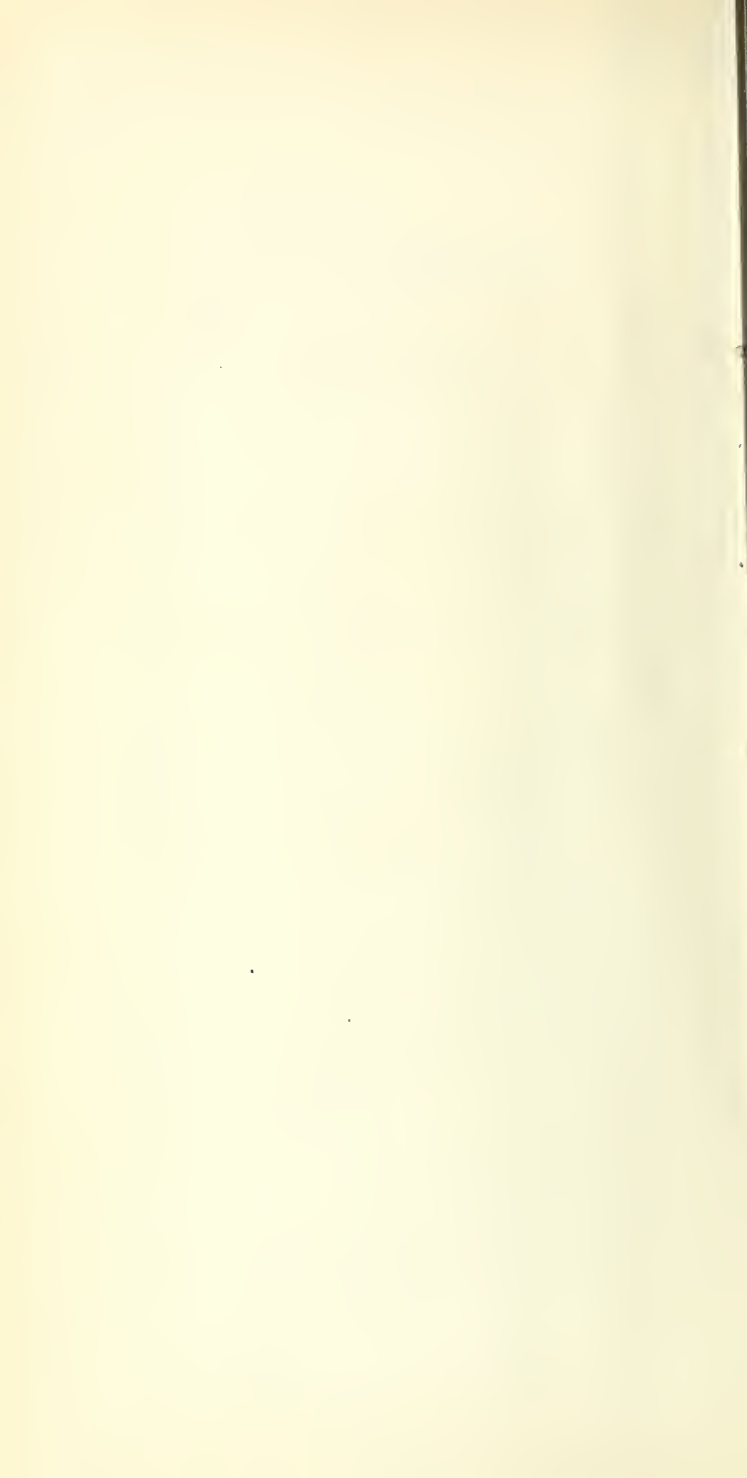
CORRECTED means:—The addition of Deaths of Accrington "residents" in Workhouse and other districts; and the subtraction of Deaths of "non-residents" occurring in the Borough, the result of which means the nett addition of

29	in	1900.	31	in	1908
17	"	1901.	31	"	1909
22	"	1902.			
19	"	1903.			
32	"	1904.			
22	"	1905.			
18	"	1906.			
30	"	1907.			

BOROUGH OF ACCRINGTON.

Borough, 621.	Victoria Hospital, 22.	Accrington Residents at Pike Law, 41.	Total, 679.
Non-Residents in Hospital, 12—10.	"	(Other) 7—48.	

DISEASES.	TOTAL.	AGES IN YEARS.																			North West Ward.		South West Ward.		North East Ward.		South East Ward.		
		0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	50 to 55	55 to 65	65 to 70	70 to 80	80 and up									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	M	F	M	F	M	F	M	F
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	M	F	M	F	M	F	M	F
General Diseases.																													
Measles	5	2	1	1			1																1		1	1		2	
Influenza	12	1									1					1	3	1	3	2			1	1	3	4	1	2	
Whooping Cough	8	2	3	2	1																3		1	3		1			
Diphtheria	6			2	1	1	1			1													3	1		1	1		
Membranous Croup	1				1																		1						
Enteric Fever	8								1		3			1	1	2							2	1	3	1		1	
Zymotic Enteritis	4	2		1														1				1		1		1	1		
Syphilis	1													1												1			
Puerperal Fever	6								1	1	2	1	1												2			3	
Erysipelas	3	2																	1			1	1		1				
Septicæmia	2										1			1												1		1	
Abscess	1			1																	1								
Tuberculosis of Lungs	34			1				1	2	6	5	3	2	4	2	4		3		1		2	3	2	8	3	3	7	6
Meninges	4	1	1							1					1						2	1	1						
Peritoneum	4	2		1												1					1	1				1	1		
Intestines	1	1																								1			
Mesenteric Glands	1		1																		1								
Bones	1															1							1						
General Tuberculosis	7	2								1			1	1	1		1				1	2		2	1			1	
Rheumatic Fever	7							1	2		1		1			1			1		3		1	1	1		1		
Chronic Rheumatism	4															1		3			3		1						
Cancer: Malignant Disease	45											1	2	3	2	6	15	6	9	1	7	7	3	11	4	8	2	3	
Pernicious Anæmia	3							1				1					1				1			2					
Diabetes Mellitus	8										1					2		5				1		3	1		1	2	
Premature Birth	19	19																		1	1	6	4	1	5	1			
Congenital Defects	11	11																		2	2	3	2		1	1			
Debility from Birth	5	4	1																	1		1				2	1		
Marasmus	1	1																				1							
Dentition	1	1																									1		
Old Age	53																1	2	24	26	6	6	9	6	5	8	8	5	
Diseases of Nervous System.																													
Simple Meningitis	8	2	3		1		1		1											1	2		2		1	2			
Softening of Brain	2																	1	1		1		1						
General Paralysis of Insane	5										1	1	1	2						3				2					
Epilepsy	3						1			1						1				1		1			1				
Convulsions	7	7																		1	1	2	1	1	1				
Locomotor Ataxy	1															1						1							
Spinal Cord Diseases	8									1					3		2	2			2		3		1		2		
Peripheral Neuritis	2																1	1					1	1					
Brain Tumour	2														1	1						1				1			
Brain Abscess	2								1			1											1		1				
Brain Diseases: Other	2				1											1							1			1			
Acromagaly	1															1							1						
Nervous System: Other Diseases of	2									1					1										1	1			
Diseases of Organs of Special Sense.																													
Middle Ear Disease	3	3																		1				1				1	
Mastoid Abscess	1	1																					1						
Diseases of Heart.																													
Valvular	15									1	1		2		1	3	4	1	2		1	1		3	2	2	2	4	
Endocarditis	1														1						1								
Pericarditis	1						1														1								
Dilated	4											1				1	1		1				1	1	1		1		
Fatty Degeneration	4																2	2			1	2					1		
Heart Disease (not defined)	25													1	1	2	11	5	4	1	3	7	5	4	1	1	1	3	
Diseases of Blood-vessels.																													
Cerebral Embolism	2														1		1				2								
Cerebral Hamorrhage	53										2	1	2		4	3	11	11	15	4	3	5	6	7	5	13	9	5	
Blood-vessels: Other Diseases of	2																2						1					1	
Diseases of Respiratory Organs																													
Laryngitis	4	1		1		1	1																3	1					
Oedema of Glottis	1	1																										1	
Acute Bronchitis	18	1												1	1	4	2	6	1	2	1	5	1	5	1	2	2	1	
Chronic Bronchitis	5																1	2	2		2				2		1		
Bronchitis (not specified)	32	5	1	2										1	1	1	4	4	10	3	4	7	5	7	3	5	1		
Lobar Croupous Pneumonia	17						2		1			2	3	1	1		5	1	1		2	2	3	4		2	2		
Lobular Broncho Pneumonia	38	20	7	1	2	2	1	2					1				1	1	1		6	4	10	6	7	1	3	1	
Pneumonia (not specified)	25	4								3	1		2	1	3	1	4	2	4		7	2	3	2	5	1	1	4	
Asthma	7								1				1				1	2	1	1		1		1	1	2	1	1	
Pleurisy	2								1		1																		
Respiratory Organs: Other diseases of	1																1						1						
Diseases of Digestive System.																													
Tonsillitis	1			1																						1			
Gastric Ulcer	2													1					1		1		1						
Stomach: Other Diseases of	2																1	1				1	1						
Enteritis	13	6		2			2		1				1			1				1	3	2	3	1		3			
Gastritis	7	5														1			1					1	1	1			
Strangulated Hernia	5													1				1	1	2		2	1	1			1		
Umbelical Hernia	1															1			1				1						
Intestinal Obstruction	5				1		1									1	1	1					2	1	2				
Duodenal Ulcer	1																1		1										
Disease of Intestines	1									1												1							
Peritonitis	3							1			1								1			1	1	1	1				
Cirrhosis of Liver	1																1				1								
Lymph &c. Diseases.																													
Status Lymphaticus	1							1												1									
Diseases of Urinary System.																													
Acute Nephritis	3	1										1							1						1		1		
Chronic Brights Disease	22							1			1	1	2	2	5	2	4	3	1		3	2	3	4	3	2	2	3	
Bladder, &c., Disease	1																		1										
Accidents of Childbirth.																													
Placenta Prævia	1								1																				



Public Health Department.

ANNUAL REPORT

OF THE

Chief Sanitary Inspector

For the Year 1909.

RICHARD DIGGLE, Assoc. Royal San. Inst.,
Chief Sanitary Inspector.

PUBLIC HEALTH DEPARTMENT,
TOWN HALL,
ACCRINGTON.

To the Sanitary Authority of the Borough of Accrington.

GENTLEMEN,

I have the honour to submit to you my ELEVENTH ANNUAL REPORT of the work done by this Department.

During the year the greater portion of the time of the Staff has been taken up with the conversion of Pail closets to Water Carriage System.

In selecting districts for this work to be done, insanitary conditions, as well as reduction of cost of collection have been kept in mind.

It should be understood that at the time of conversion, as a rule, the whole of the property is put in a sanitary condition.

Difficulties are sometimes met with when more than one person owns a block of property. In these cases, Specifications are prepared by this Department, tenders obtained, cost apportioned, and the work carried out under our supervision. I feel sure that the efforts of the Department in this direction are fully appreciated by the property owners.

Many blocks of property have been dealt with, including one row of 16 houses in Paxton Court and Scaitcliffe Street, 12 houses in Lang—Dale Streets and Willows Lane, 16 houses in Blackburn Road, etc., etc.

The following Table shows other sanitary work attended to :—

Closets and Drains opened.....	1304
Closets blocked beyond the trap	13
Tipplers broken and out of order.....	63
Sewers blocked	3
Street Gullies blocked, etc.	16
Insufficient Sanitary Accommodation	6
Pail Closets and Ashpits require reconstructing	176
Defective Drainage	171
Uncovered Ashpits	18
Defective Sinks and Waste-pipes	81
Defective Troughing and Downspouts.....	16
Houses Damp	6
Yards Insanitary	42
Accumulations of Manure.....	8
Closets altered from Pail System	158

Factory and Workshop Acts.

Many improvements were effected in some of our factories and workshops. The particulars of such improvements will be found in detail in the Medical Officer of Health's portion of the Report.

Bakehouses.

Frequent visits were made to the Bakehouses, particularly the cellar bake-houses, and no breaches of the special regulations were noted.

Dairies, Cowsheds, and Milkshops Order.

The dairy farms in the borough were inspected, and on the whole, found to be satisfactory.

I have, however, had occasion to call attention to the regulation which requires that cowsheds shall be lime-washed twice in each year, during the months of May and October. With a view of impressing upon the farmers the importance of complying with this regulation, one was brought before the magistrates and fined 2/6 and costs for non-compliance.

One cowshed has been rebuilt to comply with the regulations as regards air space, lighting, ventilation, and general sanitary requirements.

Four owners of farms have not yet complied with notices served on them to alter their cowsheds. I am hoping that something will be done with regard to these cowsheds during the coming year.

Diseases of Animals Acts.

A case of Anthrax occurred on one of the farms in August. Immediate steps were taken, as required by the Board of Agriculture, for the isolation of the other cattle, and the cleansing and disinfecting of the premises. Fortunately, no other cases occurred.

Disinfection.

The Steam Disinfecting Apparatus, supplied by Messrs. Goddard, Massey, and Warner, and which is situated at the Hyndburn Road Depot, continues to work satisfactorily, and during the year, 1,942 articles of clothing, bedding, etc., were disinfected.

344 rooms were fumigated and sprayed with a solution of formic-aldehyde. Three schools were also treated in a similar manner in consequence of members of the teaching staff having suffered from infectious disease.

Library books to the number of 47 were fumigated.

In many instances, after the recovery of a person from infectious disease, the householder preferred to have the bedding, etc. destroyed. 328 articles of bedding, etc., were destroyed.

School Inspection.

The whole of the Elementary Day Schools of the borough were inspected three times during the year. The result of such inspections was reported to the Education Authority and such recommendations as were made, adopted in each case.

In my opinion, the frequent inspections account for the marked improvement in the general cleanliness of the Schools.

Slaughterhouses and Markets.

The Slaughterhouses and Markets were frequently visited, and as a result, the following was considered unfit for food and destroyed at the Destructors :—

3,614-lbs. of Beef, 285-lbs. of Pork, 2,422-lbs. of Fish,
112-lbs. of Shell Fish, and 43 Rabbits.

The following is a summary of the animals slaughtered at the Corporation Abattoirs during the year :—

Beasts	2,633
Sheep	19,572
Calves	415
Pigs	732

Offensive Trades.

Nothing of note has occurred, under this heading, during the year.

Common Lodging Houses.

The large Model Lodging House and three smaller lodging houses were inspected every week and found to be kept in a fairly satisfactory manner.

Petroleum Acts.

Ten licences for the storage of products of Petroleum were renewed during the year.

Smoke Nuisance.

The manufacturing trade of the town has not improved during the year, and much "short" time has been worked. Eight observations were taken, each of which came within the time limit allowed for emission of black smoke (eight minutes).

Scavenging Department.

There are over 27 miles of paved Front Streets, 15 miles of paved Back Streets, and 4,280 Street gullies, in the borough.

The main thoroughfares are machine-swept twice weekly, and the secondary streets once a week. Other streets are hand-swept. In addition, men with handcarts are engaged on the main roads keeping them clear of horse litter, paper, &c.

The refuse removed from the streets was as follows :— Sweepings, 1,898 loads (in addition to the refuse from handcarts); from Street Gullies, 1,541 loads; and Snow, about 2,500 loads.

Cleansing of Ashpits, &c.

The substitution of ashbins for ashpits has increased during the year. All new houses are provided with the new pattern cage and bin made by this Department, and designed to meet the following requirements, viz. :—The

cage can be fixed in a convenient position for the householder and for the Cleansing Department's workmen. The bin being in the cage cannot be removed by the householder and used for other purposes as is often the case with loose bins.

Up to date, 480 galvanized ashbins have been supplied.

Destructors.

The alterations made to the flues twelve months ago, have proved of great advantage to the working of the plant. Previously, it was necessary to shut down every week for about five hours to clear the clinker from the small flues and in doing this work considerable damage was done to the brickwork. Since the alterations, however, it is only necessary to shut down every six weeks for this purpose. The depreciation of the brickwork is reduced considerably as well as the cost of flue cleaning.

The accompanying Table shows the cost of collecting and destroying the refuse, from 1901 to the end of 1909.

The following shows the weight of material sorted from the refuse and the amount realised for same, together with the residual from the Destructor.

	Weight.			Amount realized.		
	T.	C.	Q.	£	s.	d.
Waste paper	75	15	2	56	7	7
„ (School) ..	3	13	1	4	11	7
String	0	11	1	1	13	9
Bright tins.....	35	19	0	31	12	1
Scrap Metal	19	0	0	4	15	0
Clinker	1998	0	0	99	18	0
Mortar.....	3501	19	3	682	15	9
				<hr/> £881 13 9 <hr/>		
Last year				<hr/> £665 4 3 <hr/>		

RICHARD DIGGLE,

Chief Sanitary Inspector.

BOROUGH OF ACCRINGTON.

Cost of Collection and Destruction of Refuse.

MONTH.	DOMESTIC REFUSE.			Market, Fish and Trade Refuse.	Total weight of Refuse.	COST OF COLLECTION. (Domestic Refuse only).				Cost of Destruction (all refuse) Wages only.		TOTAL COST.	
	No. of Loads	Weight.	Average weight per Load.			Manual Labour.		Team Labour.		Amount.	per ton.	Amount.	per ton.
						Amount.	per ton.	Amount.	per ton.				
January	691	T. C. Q. 918 17 0	T. C. Q. 1 6 2	T. C. Q. 38 17 1	T. C. Q. 957 14 1	£ s. d. 36 14 3	d. 9.5	£ s. d. 60 14 4	s. d. 1 3.8	£ s. d. 60 7 10	s. d. 1 3.1	£ s. d. 157 16 5	s. d. 3 4.4
February	801	1095 6 2	1 7 1	33 19 0	1129 5 2	42 1 8	9.2	70 10 1	1 3.4	67 8 11	1 2.3	180 0 8	3 2.9
March.....	886	1169 18 3	1 6 1	43 15 1	1213 14 0	46 16 3	9.6	78 8 1	1 4.0	84 2 2	1 4.6	209 6 6	3 6.2
April	634	818 17 0	1 5 3	45 18 3	864 15 3	35 9 0	10.3	55 9 10	1 4.2	65 17 9	1 6.3	156 16 7	3 8.8
May	773	976 13 3	1 5 1	38 16 0	1015 9 3	40 10 6	9.9	68 14 7	1 4.9	67 14 7	1 4.0	176 19 8	3 6.8
June	938	1187 16 1	1 5 1	57 14 1	1245 10 2	50 14 8	10.2	82 13 8	1 4.7	84 16 10	1 4.3	218 5 2	3 7.2
July	809	1052 12 1	1 6 0	56 8 1	1109 0 2	38 3 5	8.7	72 19 1	1 4.6	64 14 10	1 2.0	175 17 4	3 3.3
August	649	821 10 3	1 5 1	59 9 1	881 0 0	33 13 8	9.8	59 1 9	1 5.2	61 11 1	1 4.7	154 6 6	3 7.7
September	902	1103 11 1	1 4 1	67 4 3	1170 16 0	44 0 6	9.5	83 14 10	1 6.2	75 9 0	1 3.4	203 4 4	3 7.1
October.....	698	888 14 2	1 5 1	62 3 3	950 18 1	33 18 5	9.1	64 7 0	1 5.3	58 0 2	1 2.6	156 5 7	3 5.0
November	632	795 2 0	1 5 0	46 11 1	841 13 1	33 15 7	10.1	56 7 2	1 5.0	57 19 8	1 4.5	148 2 5	3 7.6
December	712	953 4 2	1 6 3	60 16 3	1014 1 1	39 16 7	10.0	66 7 0	1 4.7	71 19 9	1 5.0	178 3 4	3 7.7
1909.....	9125	11782 4 2	1 5 3	611 14 2	12393 19 0	475 14 6	9.6	819 7 5	1 4.6	820 2 7	1 3.8	2115 4 6	3 6.0
1908.....	9228	12009 15 0	1 6 0	637 10 0	12647 5 0	465 10 5	9.3	824 19 10	1 4.5	861 1 8	1 4.3	2151 11 11	3 6.1
1907.....	9045	11922 19 0	1 6 1	565 2 2	12488 1 2	439 16 2	8.8	845 5 5	1 5.0	881 7 2	1 4.9	2166 8 9	3 6.7
*1906.....	6558	8916 11 1	1 7 1	373 7 3	9289 19 0	321 17 4	8.6	626 1 3	1 4.8	596 5 9	1 3.4	1544 4 4	3 4.8
1905.....	7373	11282 10 2	1 10 2	512 6 1	11794 16 3	412 8 11	8.7	776 14 0	1 4.5	759 0 10	1 3.4	1948 3 9	3 4.6
1904.....	7438	11468 5 1	1 10 3	497 16 3	11966 2 0	440 5 10	9.2	765 6 9	1 4.0	722 2 7	1 2.4	1927 15 2	3 3.6
1903.....	7961	11031 9 2	1 7 2	493 7 2	11524 17 0	409 7 9	8.9	836 7 6	1 6.1	798 1 2	1 4.6	2043 16 5	3 7.6
1902.....	9418	11503 13 3	1 4 1	441 17 1	11945 11 0	476 2 5	9.9	978 1 6	1 8.4	847 7 7	1 5.0	2301 11 6	3 11.3
1901.....	8783	10416 12 1	1 3 2	363 7 3	10780 0 0	453 3 8	10.4	890 15 6	1 8.5	800 13 11	1 5.8	2144 13 1	4 0.7

* In May, June, and July, the Destructors were shut down for alterations, and during that time, 1,990 Loads of Refuse were tipped at the various tips.

R. DIGGLE, Superintendent.

